

REMARKS/ARGUMENTS

Reconsideration of this application is requested. Claims 1, 2, 5-7, 10-16, 18-20, 47, 48, 51-60 and 62-64 are in the case.

I. THE OBVIOUSNESS REJECTIONS

Claims 1, 2, 5, 10, 11, 19, 20, 47, 48, 54, 55, 63 and 64 stand rejected under 35 U.S.C. §103(a) as allegedly unpatentable over U.S. Patent 4,084,958 to Collin et al in view of U.S. Patent 4,374,663 to Collin et al. That rejection is respectfully traversed.

As now claimed, the invention provides a reactor for containing a solid catalyst for a heterogeneous gas-phase reaction, the reactor being a fluid bed reactor comprising a grid, and into which reactor there extend more than one inlet pipes for a molecular oxygen-containing gas. The inlet pipes have surround means for surrounding a substantial portion of the pipes in the reactor with an inert gas. The surround means are provided with a supply of an inert gas, and the inert gas surrounding the inlet pipes is sealed.

The '958 Collin patent does not disclose or suggest the use of a surround means provided with a supply of an inert gas, as now recited in amended claim 1. This deficiency is not cured by the '663 Collin patent which describes providing a nozzle with a cooling jacket (see item 7 in Figure 2). The cooling jacket uses water as the cooling medium to prevent particles of reduced iron from adhering to the nozzles.

In light of the above, it is believed that one of ordinary skill as of the filing date of the present application would not have been motivated to arrive at the invention as now claimed based on the combined disclosures of the two cited Collin patents. Absent any

such motivation, a *prima facie* case of obviousness is not generated in this case.

Reconsideration and withdrawal of the outstanding obviousness rejection based on the two cited Collin patents is accordingly respectfully requested.

Claims 7 and 53 stand rejected under 35 U.S.C. §103(a) as allegedly unpatentable over Collin '958 in view of Collin '663 and further in view of Japanese Patent 55-36673 to Takeuchi et al. That rejection is respectfully traversed.

Claim 7 is dependent on claim 1 and claim 53 is dependent on claim 47 which likewise has been amended to recite a surround means provided with the supply of an inert gas. Based on this, the subject matter of claims 7 and 53 is not suggested by the two Collin patents for the above-discussed reasons. Takeuchi is cited for an alleged disclosure relating to pressure change detecting means, but is otherwise irrelevant so far as the invention as claimed in claims 7 and 53. Withdrawal of the outstanding obviousness rejection of claims 7 and 53 is accordingly respectfully requested.

Claims 6, 12-16, 52 and 56-60 stand rejected under 35 U.S.C. §103(a) as allegedly unpatentable over Collin '958 in view of Collin '663 and further in view of U.S. Patent 3,411,716 to Stephan et al. That rejection is respectfully traversed.

The rejected claims are all dependent, either directly or indirectly on an independent claim which has been amended to specify that the surround means is provided with the supply of an inert gas. This concept is not suggested by the two Collin patents for the above-discussed reasons. That deficiency is not cured by Stephan which is relied upon for an alleged disclosure relating to the provision of thermal expansion means to pipes of high-temperature reaction apparatus. Withdrawal

of the outstanding obviousness rejection of claims based on the combined disclosures of the Collin patents and Stephan et al is accordingly respectfully requested.

Claims 18 and 62 stand rejected under 35 U.S.C. §103(a) as allegedly unpatentable over the two Collin patents discussed above and further in view of U.S. Patent U.S. Patent 5,801,265 to Wagner et al. Claims 18 and 62 are each dependent on an independent claim which has been amended as discussed above, which is not suggested by the combined disclosures of the two Collin patents for the above-discussed reasons. Wagner fails to cure those deficiencies in that it is relied upon as allegedly suggesting that it would have been obvious to configure pipes at a distance significantly in excess of potential flame length. This is not conceded and, in any event, it is believed that there would have been no motivation for one of ordinary skill to combine the two Collin disclosures with Wagner to arrive at the subject matter as claimed in dependent claims 18 and 62. Withdrawal of this obviousness rejection is accordingly respectfully requested.

Claims 1, 2, 5, 6, 10-16, 19, 20, 47, 48, 51, 52, 54-60, 63 and 64 stand rejected under 35 U.S.C. §103(a) as allegedly unpatentable over U.S. Patent 2,654,658 to Marshall Jr. in view of Collin et al '958. That rejection is respectfully traversed.

The Collin patents are irrelevant for the reasons discussed in detail above. Marshall is likewise irrelevant in that its disclosure relates to spraying hot nitric acid through nozzles which maybe surrounded by a pipe containing a cooling liquid (see column 5, lines 27-34). The surround means in Collin and Marshall, therefore, are for cooling purposes. Liquids are conventionally regarded as superior cooling agents to gases and it would, therefore, not have been obvious to one of ordinary skill that an

inert gas could be used. Even if one of ordinary skill would have contemplated utilizing an inert gas (it is believed that that would not have occurred to one of ordinary skill), it would not have been obvious that it would have operated in a coolant in the disclosures of Collin and Marshall.

Based on the above, one of ordinary skill would not have been motivated to replace the cooling liquid in Marshall or Collin with an inert gas as in the presently claimed invention. Absent any such motivation, one of ordinary skill would not have arrived at the invention as now claimed. In the absence of any such motivation, a *prima facie* case of obviousness is not generated by the combined disclosures of Collin and Marshall. Withdrawal of the outstanding obviousness rejection based on those references is accordingly respectfully requested.

II. CLAIM AMENDMENTS

As noted earlier, claims 1 and 47 have been amended to specify that the surround means is provided with a supply of an inert gas. Basis for this amendment appears at page 3, lines 19-20 in the application as originally filed. No new matter is entered.

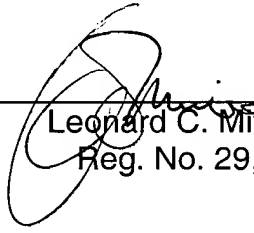
Allowance of the application is awaited.

BECKER et al
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Respectfully submitted,

NIXON & VANDERHYE P.C.

By: _____


Leonard C. Mitchard
Reg. No. 29,009

LCM:lfm
1100 North Glebe Road, 8th Floor
Arlington, VA 22201-4714
Telephone: (703) 816-4000
Facsimile: (703) 816-4100